



Scientist, Senior

Job Code: 2042

Originated: 08/2006

Salary Grade: 2158

FLSA: Exempt

Revised: New

EEO Code: 21

Supervisory: Yes

HR Ordinance Status: Unclassified

CLASS SUMMARY

The fundamental reason the Scientist, Senior classification exists is to conduct research studies on raw and finished water to detect and investigate unregulated compounds and contaminants, develop new or improved methods for the detection, quantification and analysis of compounds, to assess whether treatment processes will remove drinking water contaminants. Scientist, Senior complete complex quantitative chemical and/or microbiological analyses requiring the application and interpretation of advanced professional, scientific principles and techniques.

DISTINGUISHING CHARACTERISTICS

The Scientist, Senior is an advanced professional/technical level in the chemistry class series. Incumbents develop and evaluate methods of contaminant detection and analysis, requiring full proficiency in the use and maintenance of complex, state-of-the-art instrumentation (GC, GC/MS, LC/MS, ICP/MS, Microscopy and Molecular Techniques) and the ability to use judgment to interpret data or test results/findings from analyses conducted.

A Senior Scientist is the senior technical expert for the quality and performance of special projects and research activities, and is distinguished from a Scientist by either degree of education or additional years of experience including publication and presentation of research findings.

ESSENTIAL FUNCTIONS

Performs duties and responsibilities commensurate with assigned functional area within a department(s) which may include, but are not limited to, any combination of the following tasks:

- Performs same duties as Scientist.
- In addition, will prepare and write material for grant proposals, conference posters, peer reviewed journal articles and abstracts and final project reports.
- Makes presentations to management, staff, regulators and other public agencies, the public and professional groups.
- Researches and identifies available technology for the online monitoring of water sources for security and water quality data.
- Performs other related duties as assigned.

MINIMUM QUALIFICATIONS

Knowledge, Skills and Abilities

Knowledge of:

Laboratory technique and protocols for chemical or microbiological analysis of water and wastewater samples.

Must know, understand and follow QC requirements for each analytical method. Theory, principles, practices, methods, chemicals and agents used in trace metals, chemical and physical analysis and testing of water; water sample preparation methods; laboratory procedures for water analysis; methods and processes used in raw water treatment; federal EPA regulations and Safe Drinking Water Act; the operation and maintenance of applicable complex, laboratory instrumentation and related computer programs and software; programmable laboratory equipment; federal EPA methodologies; the use of standard laboratory glassware, beakers, flasks, pipettes, etc.; safe laboratory practices and procedures; quality control techniques.

Ability to:

Establish and maintain effective working relationships with co-workers, supervisors, and the general public.

Operate and enter data or information into a personal computer.

Prioritize own work tasks and complete work within specified time periods and deadlines.

Operate complex automated/programmable laboratory equipment in the inorganic and organic analysis of raw and potable water samples.

Apply principles and scientific methods to the development of new methodologies for identifying unregulated compounds and contaminants.

Calibrate, maintain and perform minor repairs on laboratory equipment.

Understand and carry out testing protocols.

Make complex mathematical calculations.

Prepare accurate reports and records of test results and special analyses; conduct original research.

Present scientific data clearly and concisely, both orally and in writing.

Provide guidance and direction to less experienced professional and technical staff.

Education and Experience

A Scientist, Senior must have five years of increasingly responsible chemical or microbiological laboratory experience in an environmental water quality laboratory, two of which focused on the utilization of applicable complex instrumentation conducting water analysis and a Master's degree. In lieu of a Master's degree, a Bachelor's degree with a minimum of 30 semester hours in Chemistry or Microbiology, 5 additional years of experience and completion of at least one research project and/or pilot study including the publication of findings in industry journals or presentation to professional groups may be substituted. Must have 4 years mass spectrometer or molecular techniques as applicable.

Licensing and Other Requirements

Operate a motor vehicle requiring a valid standard Arizona driver's license with no major driving citations in the last 39 months.

State of Arizona Grade 2 Water and Wastewater Treatment Operator Certification.

Work occasional weekend and emergency.

SUPERVISION RECEIVED AND EXERCISED

Positions in this classification report to the Laboratory Manager and may or may not supervise.

WORK ENVIRONMENT/PHYSICAL DEMANDS

The physical demands and work environment characteristics described here are representative of those that must be met by an employee to successfully perform the essential functions of this job or that an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Operates a variety of standard office and laboratory equipment, which requires continuous and repetitive eye, arm or hand movements and the ability to visually distinguish the full range of the color spectrum in order to perform laboratory tests.

This job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.